Sudden global health impairment in a male patient– could it be hypophysitis?

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Introduction

Hypophysitis:

- ❖chronic inflammatory condition of the pituitary gland
- ❖presents with hypopituitarism and a pituitary mass
- ❖ classified as lymphocytic, granulomatous or xanthomatous hypophysitis
- ❖ non-invasive diagnosis:
  - clinical
  - biological: pituitary deficiency
  - MRI
- ❖ invasive diagnosis:
  - pituitary biopsy(1)
- ❖ rare disease, with an estimated incidence of 1/9000000
  - most reported cases: women during peripartum
  - only approximately 15% occur in males(3)

Table 1: Clinical manifestations of hypophysitis (3)

	Effects	Symptoms
Pituitary enlargement	Compression of optic chiasm Expansion in cavernous sinus	Visual field, acuity reduction Headache
Anterior pituitary defects	Hypocortisolism Hypothyroidism Hypogonadism Hypoprolactinemia	Hypotension, hypoglycaemia Fatigue, mixedema, bradycardia Impotence, decreased libido Impaired lactation
Infundibulum/posterior pituitary	Diabetes insipidus	Polyuria, polydipsia
Stalk impairment	Hyperprolactinemia	Amenorrhea/galactorrhea

MRI

- ❖ Pituitary enlargement
- ❖ Symmetrical suprasellar expansion
- ❖ Stalk thickened
- ❖ After gadolinium:
  - Intense and homogeneous enhancement of pituitary mass

Case report

- ❖ **Patient**
  - male patient
  - 57 years old
  - smoker
  - just returned from India
  - was send to Endocrinology Department for nodular goiter
- ❖ **Medical history:**
  - hypertension;
- ❖ **Symptoms**
  - weight loss (5 kg in 2 months)
  - important asthenia
  - anorexia
  - somnolence
  - fever
- ❖ **Clinical examination**
  - blood pressure: 110/80 mmHg without treatment
  - flushing
- ❖ **First investigations**
  - raised inflammatory markers

ESR=18 mm/1h (N:1-13)
CRP=1.61 mg/dl (N:0-0.5)
Fibrinogen=511 mg/dl (N:200-400)

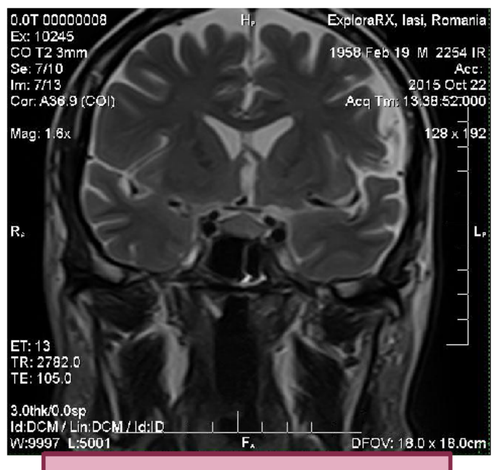
- thyroid ultrasound: nodular goiter
- secondary hypothyroidism

TSH=0.102 µUI/ml (N:0.4-4)
fT4=0.558 ng/dl (N:0.89-1.76)

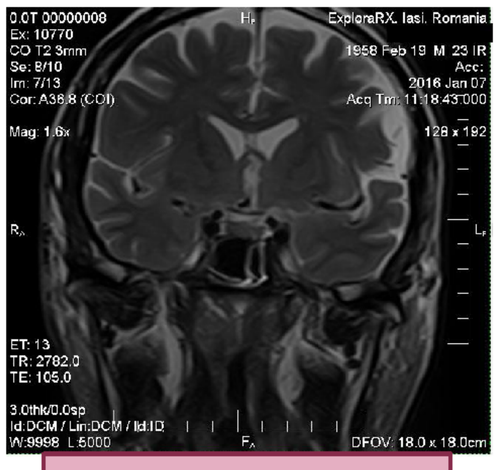
Pituitary insufficiency?

Laboratory findings and evolution

Parameter	Normal values	Before treatment	One month after treatment initiation
TSH	0.4-4 µUI/ml	0.102	3.04
FT4	0.89-1.76 ng/dl	0.558	1.25
ACTH	0-46 pg/ml	19.7	37.2
Morning cortisol	5-25 µg/dl	<1	10.7
FSH	0.7-11.1 mIU/ml	1.22	11
LH	0.8-7.6 mIU/ml	0.477	7.5
testosterone	2.8-8 ng/ml	<0.026	4.62
PRL	2.5-17 ng/ml	14.4	-



First MRI: globular, convex and inhomogeneous aspect of the pituitary gland, with increased dimensions 9.7/17.9 mm and normal sellar floor



MRI aspect after 2 months of treatment: remission of the globular aspect, reduced height by 6 mm

- ❖ **Treatment:**
  - Methylprednisolone gradually decreasing doses: 32 mg/day for 2 days, then 16 mg/day for 8 days, then 8 mg/day for 8 days and 4 mg/day for one month
- ❖ **Evolution**
  - Clinical: after 1 month of treatment-good general condition, without asthenia, increased appetite
  - Biological: normalization of the biological parameters after 1 month of treatment
  - Imagistic, after 2 months of treatment: remission of the globular aspect, decrease in size

Discussions

❖The natural history of primary hypophysitis is variable and unpredictable. Typically, it follows a progressive course in which the pituitary initially becomes inflamed, edematous, enlarged, and then the patient develops symptoms secondary to mass effects.
❖Surgery, in addition to providing a histological diagnosis, can be very effective in achieving decompression of the sellar mass.
❖Glucocorticoids were also effective for reducing the size of the pituitary mass or the thickened stalk because of their lymphocytolytic proprieties. There were reports showing recovery of anterior and posterior pituitary function as well as mass reduction after glucocorticoid treatment.(1)
❖MRI has considerably improved the diagnostic accuracy of hypophysitis by differentiating it from pituitary tumors.(2)

Conclusion

❖Lymphocytic hypophysitis is a rare disease, especially in men (4)
❖Secondary adrenal insufficiency is one of the earliest manifestations and can become life threatening.
❖Although spontaneous remission is possible, in these cases, as it was in our patient, treatment is preferable.
❖The rapid good evolution sustained the diagnosis which can often be made on the basis clinical, biological and imagistic features, pituitary biopsy not being always necessary for effective management of the disease.

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